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ABSTRACT

This explanatory booklet describes basic statistical terms used, precautions to be considered in interpreting assessment data, assessment measures used, computer printouts containing local school data, and norm tables. Appendices contain a listing of Michigan school districts classified according to the community type they serve and definitions of the educational assessment measures.

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LOCAL DISTRICT AND SCHOOL REPORT: EXPLANATORY MATERIALS

The third report of the 1970-71
Michigan Educational Assessment Program

Prepared in Research, Evaluation and Assessment Services

Michigan Department of Education

June, 1971

FOREWORD

The Michigan Educational Assessment Program was initiated by the State Board of Education, supported by the Governor, and funded by the Legislature initially through enactment of Public Act 307, of 1969, and subsequently under Public Act 38 of 1970. The ultimate goal of the Program is to provide educators and citizens with information regarding the status and progress of certain aspects of Michigan's public educational system so that they may make more informed decisions about education in the State. For 1970-71 the specific goal of the educational assessment program was to provide information relative to school district size, school resources, student background, and student/school performance in the basic skills.

The purpose of this report, the third in the 1970-71 series, is to provide local school district officials with information regarding their own school district and its schools. This information could assist them in making local decisions regarding the allocation of resources and the design of educational programs. The information also provides a general indication of areas within the local school district which may need closer study. The Michigan Educational Assessment Program is not to be viewed as an evaluation of Michigan schools. Instead it is to provide information on school student needs which along with other information may identify for citizens and local school officials the needs of local schools and children. Specific evaluations of the areas so identified may be initiated by local school people in order to determine the need and extent to which changes in curricula and resource allocations are justified. Thus, the educational assessment data may contribute to the improvement of educational programs for Michigan children and youth.

Thanks are due to a large number of individuals and groups for making the Michigan Educational Assessment Program a reality; the State Board of Education for proposing it, the Governor and Legislature for actively supporting it, and the Michigan educators for assisting with it. The Program was designed and administered by the Research, Evaluation, and Assessment Services, Michigan Department of Education, with the assistance of Educational Testing Service, and counsel of several ad hoc advisory groups.

John W. Porter
Superintendent of
Public Instruction

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INTRODUCTION

By following the procedures described in this booklet, local school officials will be able to construct education profiles which will enable them to relate their district and schools with other districts and schools in Michigan, and in their community type.¹ These profiles also will enable school officials and citizens to identify the levels of educational performance in selected basic skills areas and the levels of factors related to performance in their district and schools.

This explanatory booklet has three sections.

1. The first section describes precautions which must be considered in using and interpreting the assessment data. It also describes certain statistical terms which are necessary for the proper interpretations of the data.

2. The second section outlines the assessment measures and introduces the computer printouts which contain the local district and school data.

3. The third section describes the norm tables that are provided with this report.

It also should be noted that Appendix A contains a listing of Michigan school districts classified according to the community type that they serve; Appendix B contains the definitions of the educational assessment measures.

By careful reading of this explanatory booklet, local school officials will be able to construct and interpret education profiles for their own district and schools.

¹The community types employed in the Michigan Educational Assessment Program are described in Appendix A of this booklet.

SECTION I

PRECAUTIONS AND STATISTICAL TERMS NECESSARY FOR THE INTERPRETATION OF THE EDUCATIONAL ASSESSMENT DATA

The data presented in the school and district printouts that accompany this booklet could help to identify student and school building educational needs and therefore, when used along with needs assessment data, could lead to improved educational decision-making at the local level. This section of the report is divided into two parts. Part 1 outlines several precautions which must be exercised in the construction and interpretation of the education profiles. Part 2 defines selected statistical terms which the reader will need in order to interpret the data.

Part 1

Precautions in the Use of Assessment Data

This part discusses the following precautions; relationships among assessment variables, value of other data, accuracy of district and school norms, district and school norm tables, and comparisons with 1969-70 educational assessment results.

Relationships Among Educational Assessment Variables

Recent research indicates that certain characteristics of students' background --including their socioeconomic status and their attitudes and aspirations--are related to achievement. Research also indicates a moderate relationship between qualities of the instructional staff and achievement. In addition, available information has shown that the amount of financial resources spent by a district bears a relationship to achievement levels because schools with more financial

resources are generally able, among other things, to provide a greater variety of instructional programs and support for the teaching scaff.²

It must be understood that previous research has been conducted on large samples of schools and school districts. Therefore it must not be assumed that there will be relationships among achievement and other variables in all individual school and district reports which are being provided to Michigan school officials. Moreover, it must be understood and emphasized that causal relationships have not been demonstrated by previous research or the Michigan Educational Assessment Program data.

Value of Other Data

Care must be taken not to interpret educational assessment scores in isolation when comparing schools and school districts. It must be remembered that other relevant school and community data (e.g., population mobility, educational attitudes and aspirations of the community, density and sparsity of population, etc.) are important in drawing conclusions based on educational assessment results. It would be unfair to expect basic skills levels alone to provide totally adequate comparisons of schools and districts unless the districts are similar on all other factors.

Accuracy of District and School Means

School and district means can be subject to error for a variety of reasons. Three reasons in particular should be noted. First, when making interpretations of assessment data it is important to bear in mind the possible error that may arise in the measures used and their ability to produce meaningful and stable

²For a report and discussion of research which deals with the influence of non-school factors, e.g., socioeconomic status and attitudes and aspirations, refer to Research into the Correlates of School Performance: A Review and Summary of Literature. (Lansing, Michigan: Michigan Department of Education, Assessment Report No. 3, 1970).

information. For example, a school or district mean in reading will contain little error if the number of pupils taking the test in a district or school is large. But if the number of pupils tested in a district or school is small--say thirty--the absence of a few pupils could have an effect upon the mean reading score for that district or school.

A second source of error in school and district means may be unreliability in the individual scores upon which the means are based. The basic skills achievement test scores reported in the Michigan Educational Assessment Program are regarded as accurate enough to warrant the reporting of individual pupil scores and thus produce reliable group scores. The results of the attitudes and SES portion of the test are group estimates and are regarded by measurement experts as sufficiently reliable for reporting district or school mean scores on these measures, provided the group has at least five students enrolled at each grade to be tested and they all participate.

A third source of possible error in school and district mean scores is unrepresentativeness in the groups tested. If a significant number of fourth or seventh graders were omitted from the testing, the tested group may be unrepresentative. Another possible cause of unrepresentativeness on the mean scores of a school or district is the variation in performance from grade to grade which may occur in small districts or schools. Thus, to the extent that the grades tested are atypical of the general school enrollment, the results will not faithfully reflect the performance of pupils in the school or district.

District and School Norm Tables

In constructing the education profiles, care should be taken to use school mean scores only with the school norm tables and district mean scores only with district norm tables. Since the norming populations are different, the scores could be placed at different percentile points on the school norm table than on the district norm table. Thus, the district or school's educational profile could be

misrepresented and interpreted incorrectly.

Comparisons with the 1969-70 Educational Assessment Results

The educational assessment data contained in this report should only be compared with last year's assessment data in terms of relative standing. A future educational assessment report will present equated standard scores which will be directly comparable to the standard scores obtained in the 1969-70 Michigan Educational Assessment Program.

Part 2

Statistical Terms

The definitions of the statistical terms identified below will assist the reader in interpreting the data presented in this report. It should be noted that in order to provide greater clarity, these definitions have been rewritten from those presented in last year's reports.

Mean

A mean score is an average of a set of scores and is obtained by adding all of the scores in the set and dividing the sum by the total number of scores.

Median

The median is that point in a range of scores above which are exactly half the scores and below which are the other half. Thus, the median is that point in the "middle" of a distribution of scores.

Standard Deviation

In addition to establishing a mean for a distribution of scores, it is often useful to know the "spread" of the scores. Two groups of scores could have the same mean but the "spread" still be quite different. For example, one district might have

children whose scores on composite achievement are very similar to one another and have a mean score of fifty. In this district, the "spread" of scores would be small. Another district might have a number of children with high scores and a number of children with low scores and still have a mean score of fifty. In this district, however, the "spread" of scores would be large.

One common way of indicating the "spread" of scores is to calculate a standard deviation. The standard deviation is a method of indicating how much "spread" there is in a distribution of scores. Usually about two-thirds of the scores will fall between one standard deviation above and one standard deviation below the mean. The larger the standard deviation, the larger will be the "spread" or variability in the scores of a distribution. In the example above, the district with the mixture of high and low scores would have a larger standard deviation than would the district with similar scores.

Standard Scores

Standard scores are scores that are derived from "raw" or response scores using the mean and standard deviation. In the Michigan Educational Assessment Program, standard scores were developed so that the pupil mean score from any assessment battery measure was fifty and the standard deviation was ten, when computed for all pupils at the same grade level. For example, a pupil with a standard score of forty on reading was one standard deviation below the state mean; a pupil with a standard score of sixty was one standard deviation above the mean; a pupil with a standard score of sixty-five was one and one-half standard deviations above the mean; and so forth.

Percentile Distribution

A percentile distribution is a ranking of scores which is divided into one hundred equal parts. Each part has an equal number--one percent--of the total number of scores. Percentile distributions are useful in showing where a particular

score lies in relation to other scores. For example, a school district score at the fiftieth percentile on a distribution of assessment scores would be at the median--or middle--of the distribution. A district score at the seventy-fifth percentile would be above seventy-five percent--and below twenty-five percent--of the district scores in the distribution. In a typical distribution, fifty percent of the scores are above--and fifty percent are below--the median.

SECTION II

LISTING OF EDUCATIONAL ASSESSMENT MEASURES AND A DESCRIPTION OF THE SCHOOL AND DISTRICT REPORTS

This section of the paper consists of two parts. Part 1 lists the educational assessment measures which are presented in this booklet. (A definition of these assessment measures is included in Appendix B.) Part 2 presents a description of the Local School and District Reports which accompany this document.

Part 1

Listing of Educational Assessment Measures

For the reader's convenience the twenty-five measures reported in the Michigan Educational Assessment Program are listed in Table 1. These measures are grouped into four major categories: (1) School Resources; (2) Student Background; (3) School/Student Performance; and (4) School and District Size. Those factors which are newly added since the 1969-70 educational assessment program are indicated by an asterisk (*). Data which were necessary to compute each factor came from one of two sources: (1) Michigan Department of Education records such as the "Fourth Friday Report"³; or (2) the Michigan Educational Assessment Battery.

Table I lists the twenty-five measures which are reported at the district or school level. A perusal of Table I indicates that sixteen of the twenty-five measures are reported at the school level. The remaining nine measures were unavailable at the school building level and therefore could only be reported at the district level. The definition of each measure is provided in Appendix B.

³The State Aid Act stipulates that the fourth Friday after Labor Day is the official day for collecting enrollment data in Michigan schools.

TABLE I

A LIST OF THE TWENTY-FIVE MEASURES⁴ REPORTED
AT THE DISTRICT OR SCHOOL LEVELS

MEASURES	DISTRICT	SCHOOL
I. <u>School Resources</u>		
A. Human Resources		
(1) Pupil-Professional Instructional Staff Ratio*	X	X
(2) Pupil-Teacher Ratio	X	X
(3) Percent of Teachers with Five or More Years Experience*	X	X
(4) Average Years Teaching Experience	X	
(5) Percent of Teachers with Masters Degree	X	X
(6) Percent of Teachers Earning \$11,000 or More*	X	X
(7) Average Salary of Teachers (1969-70)	X	
B. Financial Resources		
(8) State Equalized Valuation per Resident Pupil (1969-70)	X	
(9) Local Revenue per Pupil (1969-70)	X	
(10) State School Aid per Pupil (1969-70)	X	
(11) K-12 Instructional Expense per Pupil (1969-70)	X	
(12) Total Current Operating Expense per Pupil (1969-70)	X	
II. <u>Student Background</u>		
(13) Percent of Racial-Ethnic Minority Students*	X	X
(14) Students' Estimate of Socioeconomic Status	X	X
III. <u>School/Student Performance</u>		
A. Attitude Measures		
(15) Importance of School Achievement	X	X
(16) Self-Perception	X	X
(17) Attitude Toward School	X	X
B. Basic Skills Measures		
(18) Vocabulary	X	X
(19) Reading	X	X
(20) Mechanics of Written English	X	X
(21) Mathematics	X	X
(22) Basic Skills Composite Achievement	X	X
C. Dropout Rate		
(23) School Dropout Rate*	X	
IV. <u>School or District Size</u>		
(24) Number of Students in School*		X
(25) District State Aid Membership	X	

⁴ The method of computation and sources of information for each measure are contained in the definitions presented in Appendix B.

* These measures are newly added since the 1969-70 educational assessment program.

Part 2

Description of the School and District Reports

As indicated earlier there are four major categories and twenty-five measures reported in the Michigan Educational Assessment Program. This description uses Michville as a hypothetical school district and Able as a hypothetical school building within the Michville district. The illustrative tables in this report contain fictitious data for this district and school. For the reader's convenience the measures are arranged into five groups within four major categories as shown in Table I. Similar groupings and categories are used throughout the report.

In the Local District Report (Table II) the twelve School Resources and the first measure in the Student Background category are shown as either simple ratios, years, percents, or dollars. The next nine measures, one within the Student Background category and eight within the Student/School Performance category are more complex. These nine measures are based on distributions of pupil scores and therefore the mean of the pupil scores in the district, their standard deviation, and the number of pupils are shown for each measure. Scores are reported for both the fourth and seventh grades. The twenty-third measure, School Drop-out Rate, is reported as a percent. The twenty-fifth measure, District State Aid Membership, is reported as a number and is located below the school district code number.

The format of the Local School Report (Table III) is like that of the Local District Report. As noted previously, the Local School Report contains only sixteen measures. The twenty-fourth measure, Number of Students in School, appears only on the Local School Report below the school district code number. Again, some measures are expressed as ratios and percents, while the remaining measures are described by the mean, standard deviation, and number of pupils.

1970-71 Michigan Educational Assessment Program

LOCAL DISTRICT REPORT

SCHOOL RESOURCES

HUMAN RESOURCES
Pupil-professional instructional staff ratio ☐ 18.3
Pupil-teacher ratio 23.1
Per cent of teachers with five or more years experience ☐ 3 %
Average years teaching experience (1969-70)* 9 YRS
Per cent of teachers with Masters degree 9 %
Per cent of teachers earning \$11,000 or more ☐ 5 %
Average salary of teachers (1969-70)* \$ 9,200

SCHOOL FINANCIAL RESOURCES

State equalized valuation per resident pupil (1969-70)* .. \$ 15,590
Local revenue per pupil (1969-70)* 346
State school aid per pupil (1969-70)* 273
K-12 instructional expenses per pupil (1969-70)* 373
Total current operating expense per pupil (1969-70)* 575

STUDENT BACKGROUND

STUDENT RACIAL-ETHNIC BACKGROUND
Per cent racial-ethnic minority students ☐ 49 %

STUDENT SOCIO ECONOMIC BACKGROUND
Students' estimate of socio economic status

SCHOOL/STUDENT PERFORMANCE

PERFORMANCE ON ATTITUDE MEASURES
Importance of school achievement
Self perception
Attitude toward school

PERFORMANCE ON BASIC SKILLS MEASURES

Vocabulary
Reading
Mechanics of written English
Mathematics
Basic skills composite achievement Δ

PERFORMANCE ON DROPOUT RATE

School dropout rate (1968-69) * ☐ 3.3

Δ Basic Skills Composite Achievement Scores obtained by averaging scores in Reading, Mechanics of Written English and Mathematics.
☐ These measures are newly added since the 1969-70 educational assessment program.

* These measures are available at the district level only.

TABLE II

SCHOOL * DISTRICT	MICHVILLE PUBLIC SCHOOL	CODE NUMBER	86-C10
SCHOOL OR DISTRICT SIZE:			
District State Aid Membership <input type="checkbox"/>			1,096
COMMUNITY TYPE III TOWNS			
DISTRICT SUMMARY			
GRADE FOUR		GRADE SEVEN	
Mean	Standard Deviation	Mean	Standard Deviation
49.2	8.6	50.0	9.6
47.1	9.0	48.5	8.5
48.6	9.6	47.3	8.2
51.0	8.5	48.5	7.5
49.2	9.3	47.6	8.7
48.5	8.5	49.2	9.3
49.3	9.3	47.0	9.5
50.6	8.5	48.2	10.3
48.8	9.2	51.7	8.5

1970-71 Michigan Educational Assessment Program

LOCAL SCHOOL REPORT

SCHOOL RESOURCES	
HUMAN RESOURCES	
Pupil-professional instructional staff ratio <input type="checkbox"/>	20.5
Pupil-teacher ratio	25.8
Per cent of teachers with five or more years experience <input type="checkbox"/>	6%
Per cent of teachers with Masters degree	5%
Per cent of teachers earning \$11,000 or more <input type="checkbox"/>	0%
STUDENT BACKGROUND	
STUDENT RACIAL-ETHNIC BACKGROUND	
Per cent racial-ethnic minority students <input type="checkbox"/>	7.8%
STUDENT SOCIO ECONOMIC BACKGROUND	
Students' estimate of socio economic status	
SCHOOL/STUDENT PERFORMANCE	
PERFORMANCE ON ATTITUDE MEASURES	
Importance of school achievement	
Self perception	
Attitude toward school	
PERFORMANCE ON BASIC SKILLS MEASURES	
Vocabulary	
Reading	
Mechanics of written English	
Mathematics	
Basic skills composite achievement Δ	

TABLE III

SCHOOL SUMMARY				
GRADE FOUR			GRADE SEVEN	
Mean	Standard Deviation	Number of Pupils	Mean	Standard Deviation
47.2	9.1	45		
47.1	9.6	45		
48.3	10.4	45		
51.8	8.5	45		
50.1	9.7	49		
48.6	8.5	49		
47.4	8.3	49		
48.6	7.5	49		
47.7	8.8	49		

Δ Basic Skills Composite Achievement Scores obtained by averaging scores in Reading, Mechanics of Written English and Mathematics.
☐ These measures are newly added since the 1969-70 educational assessment program.
+ DOES NOT include students in Kindergarten or Special Education.

SECTION III

NORM TABLES AND EDUCATION PROFILES

This section is divided into two parts. Part 1 describes the norm tables which are a part of this booklet. Part 2 explains how the data presented in the school and district reports may be plotted onto the norm tables to develop district-level and school-level education profiles.

Part 1

Explanation of the Norm Tables

Separate norm tables have been prepared for the fourth and seventh grades. Local school officials will receive a total of eight norm tables. The norm tables are based on statewide data or community type data as follows:

Grade 4

- a table based on the means of districts throughout Michigan
- a table based on the means of schools throughout Michigan
- a table based on the means of districts of the same community type
- a table based on the means of schools of the same community type

Grade 7

- a table based on the means of districts throughout Michigan
- a table based on the means of schools throughout Michigan
- a table based on the means of districts of the same community type
- a table based on the means of schools of the same community type

The norm tables also present the mean, standard deviation, and number of schools or districts used in preparing the distribution of each measure. Table IV provides

TABLE

D I S T R I C T

GRADE 4

SCHOOL RESOURCES												
HUMAN RESOURCES								SCHOOL FINANCIAL RESOURCES				
	(1) PUPIL/ PROF. INSTRUC- TIONAL STAFF RATIO	(2) PUPIL/ TEACHER RATIO	(3) PERCENT TEACHERS WITH 5 OR MORE YEARS EXPERI- ENCE	(4) AVERAGE YEARS TEACHING EXPERI- ENCE	(5) PERCENT TEACHERS WITH MASTERS DEGREE	(6) PERCENT TEACHERS EARNING \$11,000 OR MORE	(7) AVERAGE SALARY OF TEACHERS (1969-70)	(8) STATE EQUALIZED VALUATION PER RESIDENT PUPIL (1969-70)	(9) LOCAL REVE- NUE PER PUPIL (69-70)	(10) STATE SCHOOL AID PER PUPIL (69-70)	(11) K-12 INSTRUC- TIONAL EXPENSE PER PUPIL (1969-70)	(12) TOTAL CURRENT OPER- ATING EXPENSE PER PUPIL (1969-70)
95	26.0	28.0	100	14	43	57	10846	31790	756	444	605	893
90	24.7	27.0	75	13	36	52	10306	23845	606	425	571	802
85	23.9	26.6	71	12	33	47	9996	21514	503	411	537	758
80	23.5	26.1	68	12	29	43	9785	19092	470	398	512	718
75	23.1	25.7	65	11	26	39	9626	17412	432	389	494	695
70	22.7	25.3	63	11	25	35	9472	16248	409	376	480	674
65	22.3	24.9	61	10	23	32	9308	15138	386	363	469	654
60	22.1	24.6	60	10	21	29	9203	14380	364	351	459	641
55	21.8	24.3	58	10	20	25	9103	13368	343	340	450	633
50	21.5	24.0	56	9	18	22	8988	12787	328	331	440	626
45	21.3	23.7	54	9	17	16	8861	12337	310	323	435	615
40	20.9	23.3	52	9	16	12	8742	11585	291	314	426	604
35	20.6	23.1	50	8	14	10	8613	11165	230	307	420	592
30	20.2	22.8	48	8	13	7	8461	10561	261	298	412	582
25	19.8	22.2	45	7	11	4	8291	9984	248	285	404	573
20	19.4	21.7	43	7	9	0	8142	9334	235	279	393	561
15	18.9	21.0	41	7	6	0	7901	8794	220	251	380	545
10	18.1	20.0	37	6	0	0	7309	8062	203	216	357	516
5	16.6	18.0	28	5	0	0	6394	7114	173	166	292	410
MEAN	21.5	23.8	56.0	9.6	19.3	23.2	8907	15466	372	326	451	639
STANDARD DEVIATION	3.2	3.4	18.3	3.5	12.9	19.9	1324	12544	197	86	93	139
NUMBER OF DISTRICTS	612	612	612	590	612	612	607	611	611	603	610	611

N O R M S

MICHIGAN

STUDENT BACKGROUND		SCHOOL/STUDENT PERFORMANCE									SCHOOL OR DISTRICT SIZE	
		ATTITUDE MEASURES (DISTRICT MEANS)			BASIC SKILLS MEASURES (DISTRICT MEANS)					DROPOUT RATE		
(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	
PERCENT OF RACIAL-ETHNIC MINORITY STUDENTS	STUDENTS' ESTIMATE OF SOCIO ECONOMIC STATUS (DISTRICT MEANS)	IMPORTANCE OF SCHOOL ACHIEVEMENT	SELF PERCEPTION	ATTITUDE TOWARD SCHOOL	VOCABULARY	READING	MECHANICS OF WRITTEN ENGLISH	MATHEMATICS	BASIC SKILLS COMPOSITE ACHIEVEMENT	SCHOOL DROPOUT RATE (1966-69)	DISTRICT STATE AID MEMBERSHIP	
20	54.3	52.1	52.5	53.5	55.6	55.4	56.0	56.4	55.7	10.2	10847	PERCENTILE DISTRIBUTION
10	52.9	51.4	51.7	52.5	54.1	54.2	54.1	54.4	54.2	8.4	6720	
7	52.2	51.0	51.2	51.9	53.3	53.7	53.4	53.8	53.5	7.5	5134	
5	51.6	50.7	50.9	51.5	52.7	53.1	52.8	53.2	52.9	7.0	4115	
3	51.2	50.5	50.7	51.3	52.2	52.8	52.4	52.8	52.6	6.6	3427	
3	50.7	50.3	50.5	51.0	51.8	52.5	52.0	52.4	52.2	6.3	2784	
2	50.4	50.0	50.3	50.8	51.4	52.2	51.6	52.0	51.9	5.9	2390	
2	50.2	49.9	50.0	50.6	51.2	51.9	51.3	51.7	51.6	5.6	2106	
1	49.8	49.6	49.8	50.3	50.8	51.6	51.1	51.4	51.3	5.2	1913	
1	49.6	49.4	49.7	50.1	50.5	51.3	50.8	51.1	51.0	4.9	1694	
1	49.3	49.1	49.5	49.9	50.3	51.0	50.4	50.7	50.8	4.4	1458	
1	49.0	48.9	49.4	49.7	49.9	50.7	50.1	50.4	50.5	4.2	1252	
1	48.6	48.7	49.1	49.5	49.7	50.3	49.7	50.1	50.1	3.8	1108	
1	48.3	48.5	48.9	49.2	49.5	49.9	49.4	49.7	49.8	3.5	863	
0	48.0	48.2	48.7	49.0	49.2	49.7	49.1	49.3	49.5	3.2	696	
0	47.6	47.9	48.3	48.6	48.8	49.1	48.8	48.8	49.1	2.8	520	
0	47.1	47.4	48.0	48.1	48.1	48.5	48.2	48.4	48.5	2.4	292	
0	46.4	46.6	47.5	47.6	47.1	47.7	47.4	47.6	47.8	2.0	132	
0	45.0	45.5	46.7	46.5	46.4	46.6	46.3	46.3	46.7	1.3	36	
4.5	49.6	49.2	49.6	50.0	50.7	51.1	50.7	51.1	51.0	5.1	3541	MEAN
10.4	2.8	2.2	2.0	2.2	2.8	2.7	2.9	2.9	2.7	2.8	12696	STANDARD DEVIATION
612	574	574	574	574	577	577	577	577	577	507	611	NUMBER OF DISTRICTS

PERCENTILE DISTRIBUTION

an example of a norm table constructed with statewide, district-level fourth grade data. Column 1 indicates that the statewide median (50th percentile) district level pupil-professional instructional staff ratio was 21.5. The 75th percentile ratio was 23.1 and the 25 percentile ratio was 19.8. In the bottom three rows of the table are the mean score, standard deviation, and number of districts used in the preparation of each distribution. For example the mean district level pupil-professional instructional staff ratio was 21.5; the standard deviation was 3.2; and 612 districts were used in determining these values. It should be noted that the number of districts in all columns are not equal. Variations are due to the unavailability of data for certain districts and to the exclusion from the norms of districts that tested fewer than five pupils.

Table V provides an example of a profile constructed with statewide, school-level fourth grade data. The data in Tables IV and V are identical to the statewide fourth grade norm tables included for use by the local district.

Explanation of the Michville District-Level Education Profile

The line on Table IV is the fourth grade district-level education profile for Michville. The scores that have been plotted are the Michville district-level average scores on the assessment measures. This district-level education profile for Michville (Table IV) was constructed as follows:

Step One. Michville's pupil-professional instructional staff ratio, 18.3, was taken from the Local District Report (see Table II).

Step Two. The point in the pupil-professional instructional staff ratio column of the district-level norm table corresponding to 18.3 was marked (see Table IV). Michville's pupil-professional instructional staff ratio was found to fall between 18.1 and 18.8, or at about the 11th percentile of the distribution of district means.

Step Three. Steps one and two were repeated for each measure listed in the Michville District Report. For example Table IV shows that Michville scored 23.1 (about the 35th percentile) on pupil-teacher ratio and 3% (about the 13th percentile) on percent of teachers with five or more years experience.

SCHOOL NORMS

GRADE 4														MICHIGAN		
PERCENTILE DISTRIBUTION	SCHOOL RESOURCES					STUDENT BACKGROUND		SCHOOL/STUDENT PERFORMANCE							SCHOOL OR DISTRICT SIZE	
	HUMAN RESOURCES					ATTITUDE MEASURES (SCHOOL MEANS)		BASIC SKILLS MEASURES (SCHOOL MEANS)								
	(1)	(2)	(3)	(4)	(5)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)		(22)
	PUPIL/PROF. INSTRUCTIONAL STAFF RATIO	PUPIL/TEACHER RATIO	PERCENT TEACHERS WITH 3 OR MORE YEARS EXPERIENCE	PERCENT TEACHERS WITH MASTERS DEGREE	PERCENT TEACHERS EARNING \$11,000 OR MORE	PERCENT RACIAL/ETHNIC MINORITY STUDENTS	STUDENTS' ESTIMATE OF SOCIO-ECONOMIC STATUS (SCHOOL MEANS)	IMPORTANCE OF SCHOOL ACHIEVEMENT	SELF PERCEPTION	ATTITUDE TOWARD SCHOOL	VOCABULARY	READING OF WRITTEN ENGLISH	MECHANICS OF WRITTEN ENGLISH	MATHEMATICS	BASIC SKILLS COMPOSITE ACHIEVEMENT	NUMBER OF STUDENTS IN SCHOOL
95	28.8	31.3	94	50	79	95	58.0	53.8	53.8	53.9	56.9	56.1	56.4	56.9	56.4	712
90	27.7	30.1	85	41	71	41	55.5	52.8	52.9	53.1	55.3	55.0	55.2	55.4	55.0	602
85	26.8	29.4	80	37	65	18	54.1	52.3	52.2	52.5	54.3	54.2	54.3	54.5	54.2	539
80	26.2	28.8	76	33	60	10	53.1	51.9	51.8	52.0	53.5	53.6	53.6	53.9	53.6	500
75	25.6	28.2	73	30	56	6	52.4	51.5	51.4	51.6	52.9	53.1	53.0	53.3	53.1	468
70	25.1	27.8	70	28	53	4	51.7	51.2	51.1	51.3	52.2	52.7	52.5	52.7	52.6	441
65	24.6	27.3	67	25	50	3	51.3	50.9	50.8	51.0	51.8	52.2	52.0	52.2	52.1	416
60	24.2	26.8	65	23	46	3	50.7	50.6	50.4	50.8	51.3	51.8	51.5	51.8	51.7	390
55	23.8	26.5	62	20	43	2	50.3	50.2	50.1	50.4	50.9	51.4	51.1	51.3	51.3	367
50	23.3	26.1	60	18	39	2	49.9	49.9	49.9	50.1	50.5	51.0	50.6	50.9	50.8	345
45	22.7	25.7	57	16	36	1	49.4	49.7	49.7	49.8	50.0	50.6	50.1	50.4	50.4	326
40	22.3	25.1	55	15	32	1	48.9	49.3	49.4	49.5	49.6	50.1	49.7	50.0	49.9	306
35	21.8	24.9	52	13	28	1	48.4	49.1	49.2	49.1	49.2	49.6	49.2	49.5	49.5	283
30	21.2	24.3	50	11	23	1	48.0	48.8	48.8	48.8	48.7	49.0	48.7	48.8	48.9	259
25	20.7	23.7	46	9	18	1	47.3	48.3	48.5	48.5	48.0	48.3	48.1	48.1	48.4	232
20	20.1	23.0	43	7	13	0	46.5	47.9	48.1	48.0	47.2	47.5	47.3	47.3	47.6	202
15	19.2	22.2	38	0	6	0	45.6	47.5	47.7	47.5	46.1	46.2	46.1	46.0	46.3	169
10	18.2	21.1	33	0	0	0	44.3	46.7	47.2	47.0	44.5	44.6	44.4	44.2	44.5	140
5	16.6	19.7	27	0	0	0	42.6	45.5	46.3	46.0	42.6	42.0	42.3	41.7	42.2	90
MEAN	23.1	25.9	59.5	20.5	38.2	12.0	49.9	49.9	50.0	50.0	50.3	50.4	50.3	50.4	50.4	368
STANDARD DEVIATION	4.0	3.9	20.3	15.4	25.0	25.7	4.5	2.5	2.3	2.5	4.1	4.1	4.1	4.4	4.1	206
NUMBER OF SCHOOLS	2524	2524	2529	2529	2529	2528	2427	2427	2427	2427	2492	2492	2492	2492	2492	2524

Step Four. A line was drawn connecting the points plotted on the norm table (see Table IV). This line represents the way in which Michville district means compare with the statewide distribution of district means for each measure.

Explanation of the Michville School-Level Education Profiles

Michville's school-level education profiles (Table V) were prepared with information from the assessment measures gathered at the school building level (see page 9 for the listing of school-level measures). Like the district data in Table IV, the numbers of schools in all columns are not equal. Variations are due to the unavailability of data for certain schools and to the exclusion from the norms of schools that tested fewer than five pupils. The procedures used were as follows:

Step One. Able Elementary School's mean on pupil-professional instructional staff ratio, 20.5, was located on the Local School Report (see Table III).

Step Two. The appropriate points in the pupil-professional instructional staff ratio column of the school mean norm tables were found and marked (see Table V). The scores 20.5 was found to fall between 20.1 and 20.7, or near the 23rd percentile.

Step Three. Steps one and two were repeated for the means on each variable listed for the Able Elementary School.

Step Four. Lines were drawn on the school mean norm table connecting the points established in step one, two and three. This line is the profiles for the Able Elementary Schools. The profiles of additional schools may be shown on the same table.

Part 2

Uses of Education Profiles

The introduction to this booklet stated that construction of education profiles would enable school officials and citizens to identify the levels of educational performance and the levels of factors related to performance in a district and its schools in terms of the state as a whole, and in terms of other districts and school of the same community type. Tables IV and V provide this information

for Michville.

As an example of the potential use of these data, Table IV indicates that the fourth grade pupils in Michville school district scored, on the average, low on reading. This information could be used by the Michville school district officials as a general indicator of a subject area that might need in-depth analysis. The analysis of the reading program (i.e., the district's delivery system for reading) would be conducted by the local school district. The results of the analysis hopefully would indicate appropriate curricular and resource adjustments.

The construction of educational profiles similar to those constructed for Michville will enable school officials and citizens throughout Michigan to gain a greater understanding of the relative standing of their district and its schools. This information along with other information will be helpful to local school officials as they make decisions about the allocation of educational resources and the design of curricula.

APPENDIX A

LISTING OF MICHIGAN SCHOOL DISTRICTS CLASSIFIED BY MAJOR COMMUNITY TYPE SERVED

The pupil membership of the school districts listed in this section is reported in Bulletin 1012 which is available from Administrative Services of the Department of Education. The list contains 628 school districts that were in existence at the time of testing. Of these, 531 were organized to operate K-12 programs. The remainder, which are denoted by an asterisk (*), were not organized to operate a K-12 program in 1970-71.

DEFINITIONS OF COMMUNITY TYPES⁵

Type I - Metropolitan Core: One or more adjacent cities with a population of 50,000 or more which serve as the economic focal point of their environs.

II - City: Community of 10,000 to 50,000 that serves as the economic focal point of its environs.

III - Town: Community of 2,500 to 10,000 that serves as the economic focal point of its environs.

IV - Urban Fringe: A community of any population size that has as its economic focal point a metropolitan core or a city.

V - Rural Community: A community of less than 2,500.

The numbers preceding school district names are Department of Education county and school district code numbers. The first two digits refer to the county, and the remaining three digits refer to the school district within the county. A key to the county code number is located on page 28.

⁵These definitions of community types were arrived at in the Fall of 1969, and are identical to the community types reported in the 1969-70 Michigan Educational Assessment Program.

COMMUNITY TYPE I - METROPOLITAN CORE

81-010	Ann Arbor City S D	38-170	Jackson Union S D
13-020	Battle Creek City Schs	39-010	Kalamazoo City S D
09-010	Bay City S D	33-020	Lansing Pub S D
82-010	Detroit City S D	61-010	Muskegon City S D
25-010	Flint City S D	61-020	Muskegon Heights City S D
41-010	Grand Rapids City S D	63-030	Pontiac City S D
82-060	Hamtramck City Schs	73-010	Saginaw City S D
82-070	Highland Park City Schs		

COMMUNITY TYPE II - CITY

46-010	Adrian City S D	58-010	Monroe City Pub Schs
13-010	Albion City Schs	50-160	Mt Clemens Comm S D
04-010	Alpena City S D	37-010	Mt Pleasant City S D
11-010	Benton Harbor City S D	11-300	Niles Comm S D
83-010	Cadillac Area Pub Schs	63-100	Novi Comm S D
21-010	Escanaba Area Pub Schs	78-110	Owosso Pub S D
70-010	Grand Haven City S D	82-100	Plymouth Comm S D
70-020	Holland City S D	74-010	Port Huron City S D
27-020	Ironwood Area Schs	17-010	Sault Ste Marie Area Schs
52-170	Marquette City S D	11-020	St Joseph City S D
55-100	Menominee Area Pub Sch	28-010	Traverse City Pub S D
56-010	Midland City S D	81-020	Ypsilanti City S D

COMMUNITY TYPE III - TOWN

74-030	Algonac Comm S D	18-010	Clare Pub Schs
03-030	Allegan Pub Schs	25-150	Clio Area S D
29-010	Alma Pub Schs	12-010	Coldwater Comm Schs
50-040	Anchor Bay S D	78-100	Corunna Pub S D
32-010	Bad Axe Pub Schs	76-080	Croswell Lexington Comm S D
58-030	Bedford Pub S D	14-020	Dowagiac Union Schs
34-080	Belding Area S D	58-050	Dundee Comm S D
27-010	Bessemer City S D	78-030	Durand Area Schs
54-010	Big Rapids Pub Schs	74-050	East China Twp S D
46-040	Blissfield Comm Schs	23-050	Eaton Rapids Pub Schs
22-030	Breitung Twp S D	36-015	Forest Park S D
47-010	Brighton Area Schs	62-040	Fremont Pub S D
11-310	Buchanan Pub S D	39-050	Galesburg Augusta Comm S D
79-020	Caro Comm Schs	69-020	Gaylord Comm Schs
14-010	Cassopolis Pub Schs	21-025	Gladstone Area Pub S D
15-050	Charlevoix Pub S D	26-040	Gladwin Comm Schs
23-030	Charlotte Pub Schs	59-070	Greenville Pub Schs
16-015	Cheboygan Area Schs	31-010	Hancock City S D
81-040	Chelsea S D	32-060	Harbor Beach Comm Sch
73-110	Chesaning Union Schs	80-120	Hartford Pub S D

COMMUNITY TYPE III (cont.)

08-030 Hastings Pub S D	03-010 Plainwell Comm Schs
30-020 Hillsdale Comm Schs	31-110 Portage Twp S D
63-210 Holly Area S D	34-110 Portland Pub S D
47-070 Howell Pub Schs	50-180 Richmond Comm Schs
70-190 Hudsonville Pub S D	63-260 Rochester Comm S D
82-340 Huron S D	41-210 Rockford Pub Schs
63-220 Huron Valley Schs	71-080 Rogers Union S D
34-010 Ionia City S D	50-190 Romeo Comm Schs
22-010 Iron Mountain City S D	82-130 Romulus Comm Schs
52-180 Ishpeming Pub S D	29-100 Saint Louis Pub Schs
29-060 Ithaca Pub Schs	81-120 Saline Area S D
07-040 L'Anse Twp S D	79-145 Sebewaing Unionville Schs
31-130 Lake Linden Hubbell S D	80-010 South Haven Pub Schs
63-230 Lake Orion Comm S D	41-240 Sparta Area Schs
44-010 Lapeer Pub Schs	49-010 St Ignace City S D
41-170 Lowell Area Schs	19-140 St Johns Pub Schs
53-040 Ludington Area S D	75-010 Sturgis City S D
51-070 Manistee City Schs	25-180 Swartz Creek Comm S D
77-010 Manistique Area Schs	48-040 Tahquamenon Area Schs
13-110 Marshall Pub Schs	35-030 Tawas Area Schs
81-100 Milan Area Schs	46-140 Tecumseh Pub Schs
61-180 Montague Pub Schs	75-080 Three Rivers Pub S D
02-070 Munising Pub Schs	15-025 Twin Valley Pub S D
52-090 Negaunee S D	82-430 Van Buren Pub Schs
11-200 New Buffalo Area S D	79-150 Vassar Pub Schs
82-390 Northville Pub Schs	39-170 Vicksburg Comm Schs
22-025 Norway Vulcan Area Schs	27-070 Wakefield Twp S D
66-050 Ontonagon Area Schs	63-290 Walled Lake Cons S D
03-020 Otsego Pub Schs	36-025 West Iron County S D
63-110 Oxford Area Comm S D	61-240 White Hall Dist Schs
80-160 Paw Paw Pub S D	33-230 Williamston Comm Schs
78-080 Perry Pub S D	70-350 Zeeland Pub S D
24-070 Petoskey S D	

COMMUNITY TYPE IV - URBAN FRINGE

82-020 Allen Park Pub Schs	25-080 Carman S D
25-130 Atherton Comm S D	73-030 Carrollton S D
63-070 Avondale S D	50-010 Center Line Pub Schs
09-030 Bangor Twp Schs	82-025 Cherry Hill S D
10-100 Bath Comm Schs	50-080 Chippewa Valley Schs
25-240 Beecher S D	63-150 City of Troy S D
25-060 Bendle Pub S D	63-090 Clarenceville S D
25-230 Bentley Comm S D	63-270 Clawson City S D
63-050 Berkley City S D	50-070 Clintondale Pub Schs
63-010 Birmingham City S D	39-030 Comstock Pub Schs
63-080 Bloomfield Hills S D	41-080 Comstock Park S D
73-180 Bridgeport Comm S D	82-230 Crestwood S D
73-080 Buena Vista S D	25-140 Davison Comm Schs

COMMUNITY TYPE IV (cont.)

19-010	De Witt Pub Schs	63-140	Madison Heights S D
82-030	Dearborn City S D	74-100	Marysville Pub S D
82-040	Dearborn Heights S D 7	33-130	Mason Pub Schs
41-090	East Grand Rapids Pub Schs	82-045	Melvindale North Allen Park S D
50-020	East Detroit City S D	38-120	Michigan Center S D
38-090	East Jackson Pub Schs	61-060	Mona Shores S D
33-010	East Lansing S D	25-040	Mt Morris Cons Schs
82-250	Ecorse Pub S D	82-220	North Dearborn Heights S D
09-050	Essexville Hampton S D	61-230	North Muskegon City S D
*82-210	Fairlane S D	41-025	Northview Pub Sch
63-200	Farmington Pub S D	63-250	Oak Park City S D
63-020	Ferndale City S D	33-170	Okemos Pub Schs
50-090	Fitzgerald Pub Schs	*23-490	Oneida Twp Sch Dist 3 (Strange)
82-180	Flat Rock Comm Schs	61-190	Orchard View Schs
25-120	Flushing Comm Schs	39-130	Parchment S D
41-110	Forest Hills Pub Schs	13-120	Pennfield S D
50-100	Fraser Pub Schs	39-140	Portage Pub Schs
*61-420	Fruitland Twp S D 1F	23-090	Pottersville Pub Schs
61-080	Fruitport Comm Schs	82-110	Redford Union S D
82-050	Garden City S D	61-220	Reeths Puffer Schs
25-070	Genesee S D	82-120	River Rouge City Schs
82-290	Gibraltar S D	82-400	Riverview Comm S D
41-120	Godfrey Lee Pub S D	50-030	Roseville City S D
41-020	Godwin Heights Pub Schs	63-040	Royal Oak City S D
25-030	Grand Blanc Comm Schs	73-040	Saginaw Twp Comm Schs
23-060	Grand Ledge Pub Schs	*11-830	Sodus Twp S D 5
41-130	Grandville Pub Schs	50-200	South Lake Schs
82-300	Grosse Ile Twp Schs	82-140	South Redford S D
82-055	Grosse Pte Pub Schs	63-060	Southfield Pub S D
*11-670	Hagar Twp S D 6	82-405	Southgate Comm S D
13-070	Harper Creek Comm Schs	70-300	Spring Lake Pub S D
82-320	Harper Woods City S D	13-030	Springfield City S D
33-060	Haslett Pub Schs	73-255	Swan Valley S D
63-130	Hazel Park City S D	82-150	Taylor S D
33-070	Holt Pub Schs	82-155	Trenton Pub Schs
82-080	Inkster City S D	50-210	Utica Comm Schs
25-110	Kearsley Comm Schs	50-220	Van Dyke Comm Schs
41-140	Kelloggsville Pub Schs	38-020	Vandercook Lake Pub S D
41-145	Kenowa Hills Pub Schs	50-230	Warren Cons Schs
41-160	Kentwood Pub Schs	50-240	Warren Woods Pub Schs
50-140	L'Anse Creuse Pub Schs	33-215	Waverly Schs
50-120	Lake Shore Pub Schs	82-160	Wayne Comm Schs
11-030	Lakeshore S D	63-160	West Bloomfield Twp S D
13-090	Lakeview Cons S D	25-210	Westwood Heights S D
50-130	Lakeview Pub Schs	82-240	Westwood Comm Schs
63-280	Lamphere Pub Schs	81-150	Willow Run Pub Schs
82-090	Lincoln Park City Schs	82-365	Woodhaven S D
82-095	Livonia Pub Schs	82-170	Wyandotte City S D
46-090	Madison Sch	41-026	Wyoming Pub Schs

COMMUNITY TYPE V - RURAL

31-020	Adams Twp S D	11-340	Bridgman Pub Sch
46-020	Addison Comm Schs	17-140	Brimley Pub Schs
58-020	Airport Comm S D	46-050	Britton Macon Area Sch
79-010	Akron Fairgrove Schs	12-020	Bronson Comm S D
05-010	Alba Pub Sch	76-060	Brown City Comm S D
01-010	Alcona Comm Schs	28-035	Buckley Comm S D
70-040	Allendale Pub S D	56-020	Bullock Creek S D
*42-010	Allouez Twp Schs	*44-190	Burnside Twp S D 1F
44-020	Almont Comm Schs	75-020	Burr Oak Comm S D
*29-130	Arcada Twp S D 1F	02-020	Burt Twp Sch
*29-170	Arcada Twp S D 6	78-020	Byron Area Schs
06-010	Arenac Eastern S D	41-040	Byron Center Pub Schs
50-050	Armada Area Schs	41-050	Caledonia Comm Schs
*07-010	Arvon Twp S D	31-030	Calumet Pub S D
29-020	Ashley Comm Schs	*31-040	Calumet Twp S D 2
13-050	Athens Area Schs	30-010	Camden Frontier Sch
60-010	Atlanta Comm Schs	*34-250	Campbell Twp S D 4
06-020	Au Gres Sims S D	74-040	Capac Comm S D
*02-010	Au Train Twp Sch	55-010	Carney Nadeau Pub Schs
43-040	Baldwin Pub S D	59-020	Carson City Crystal Area S D
21-040	Baldwin Twp Schs	76-070	Carsonville Comm S D
80-020	Bangor Pub Schs	*03-250	Casco Twp S D 4
*80-240	Bangor Twp S D 8	32-030	Caseville Pub Sch
07-020	Baraga Twp S D	79-030	Cass City Pub Schs
21-090	Bark River Harris S D	41-070	Cedar Springs Pub Schs
37-040	Beal City S D	15-035	Central Lake Pub Sch
51-020	Bear Lake Sch	59-125	Central Montcalm Pub Schs
15-010	Beaver Island Comm Schs	75-030	Centreville Pub S D
26-010	Beaverton Rural Schs	52-010	Champion Humboldt Spurr S D
05-040	Bellaire Pub Sch	31-050	Chassell Twp S D
23-010	Bellevue Comm Schs	*69-070	Chester Twp S D 1
*64-010	Benona Comm S D	54-025	Chippewa Hills S D
10-015	Benzie County Central Schs	*52-020	Chocolay Twp S D
66-010	Bergland Comm S D	*32-040	Church Sch
*34-140	Berlin Twp S D 3F	*57-100	Clam Union Twp S D 2
*34-150	Berlin Twp S D 5F	63-190	Clarkston Comm S D
11-240	Berrien Springs Pub S D	39-020	Climax Scotts Comm Schs
*27-030	Bessemer Twp S D	46-060	Clinton Comm Schs
21-065	Big Bay de Noc S D	56-030	Coleman Comm S D
*62-470	Big Jackson S D	*32-260	Colfax Twp S D 1F
73-170	Birch Run Area S D	*32-270	Colfax Twp S D 2
*32-220	Bloomfield Twp S D 4	*32-290	Colfax Twp S D 6
*32-230	Bloomfield Twp S D 5	*32-300	Colfax Twp S D 7
*32-250	Bloomfield Twp S D 7F	*54-100	Colfax Twp S D 3F
80-090	Bloomington Pub S D	11-330	Coloma Comm Schs
*49-020	Bois Blanc Pines S D	75-040	Colon Comm S D
15-030	Boyne Falls Pub S D	38-040	Columbia S D
63-180	Brandon Twp S D	38-080	Concord Comm Schs
11-210	Brandywine Pub S D	75-050	Constantine Pub S D
29-040	Breckenridge Comm Schs	70-120	Coopersville Pub S D
*49-030	Brevort Twp S D	80-040	Covert Pub Schs

COMMUNITY TYPE V (cont.)

*07-030	Covington S D	25-050	Goodrich Area S D
20-015	Crawford Au Sable Schs	62-050	Grant Pub S D
*24-010	Cross Village S D	*42-030	Grant Twp Schs
33-040	Dansville Ag Sch	38-050	Grass Lake Comm Schs
80-050	Decatur Pub Schs	*28-220	Green Lake Twp S D 1F
76-090	Deckerville Comm S D	39-065	Gull Lake Comm Schs
46-070	Deerfield Pub Schs	35-020	Hale Area Schs
08-010	Delton Kellogg S D	03-100	Hamilton Comm Schs
17-050	De Tour Twp Sch	*80-390	Hamilton Twp S D 6
81-050	Dexter Comm S D	38-100	Hanover Horton Schs
44-050	Dryden Comm Schs	24-020	Harbor Springs S D
*34-340	Easton Twp S D 6F	18-060	Harrison Comm Schs
11-250	Eau Claire Pub S D	64-040	Hart Pub S D
*13-060	Eckford Comm Schs	47-060	Hartland Cons Sch
14-030	Edwardsburg Pub Schs	73-210	Hemlock Pub S D
*64-020	Elbridge Comm S D	62-060	Hesperia Comm S D
05-060	Elk Rapids Schs	60-020	Hillman Comm Schs
32-050	Elkton Pigeon Bayport S D	61-120	Holton Pub Schs
15-065	Ellsworth Comm Sch	13-080	Homer Comm Schs
*31-070	Elm River Twp Sch	03-070	Hopkins Pub Sch
*52-030	Ely Twp S D	72-020	Houghton Lake Comm Schs
49-055	Engadine Cons Schs	46-080	Hudson Area Schs
67-020	Evart Pub Sch	58-070	Ida Pub S D
66-045	Ewen Trout Creek Cons S D	44-060	Imlay City Comm Schs
*40-060	Excelsior Twp S D 1	16-050	Inland Lakes S D
68-030	Fairview S D	*34-360	Ionia Twp S D 2F
*57-010	Falmouth Elem S D	*34-380	Ionia Twp S D 5
18-020	Farwell Area Schs	*34-390	Ionia Twp S D 6
03-050	Fennville Pub Schs	*52-050	Ishpeming Twp S D
25-100	Fenton Area Pub Schs	58-080	Jefferson Cons S D
*64-030	Ferry Comm S D	70-175	Jenison Pub Schs
*28-060	Fife Lake Comm S D	69-030	Johannesburg Central Sch
52-040	Forsyth S D	30-030	Jonesville Comm Schs
19-070	Fowler Pub Schs	51-045	Kaleva Norman Dickson Schs
47-030	Fowlerville Comm Schs	40-040	Kalkaska Pub Schs
73-190	Frankenmuth S D	41-150	Kent City Comm Schs
10-025	Frankfort Area Schs	28-090	Kingsley Area S D
*13-340	Fredonia Twp S D 2F	79-080	Kingston Comm Schs
73-200	Freeland Comm S D	78-040	Laingsburg Comm S D
53-030	Freesoil Comm S D	57-020	Lake City Area S D
29-050	Fulton Schs	25-200	Lake Fenton Sch
11-160	Galien Twp Sch	59-090	Lakeview Comm Schs
*03-440	Ganges Twp S D 4	25-280	Lakeville Comm S D
*40-110	Garfield Twp S D 3F	34-090	Lakewood Pub Schs
72-010	Gerrish Higgins S D	80-130	Lawrence Pub S D
45-010	Glen Lake Comm S D	80-140	Lawton Comm S D
80-110	Gobles Pub S D	45-020	Leland Pub S D
*64-050	Golden Comm S D	49-040	Les Cheneaux Comm S D
*44-240	Goodland Twp S D 1	33-100	Leslie Pub Schs
*44-260	Goodland Twp S D 2	*02-050	Limestone Twp Sch
*44-270	Goodland Twp S D 3	81-070	Lincoln Cons S D

COMMUNITY TYPE V (cont.)

*32-390	Lincoln Twp S D 1	*75-100	Nottawa Comm Schs
25-250	Linden Comm S D	61-065	Oakridge S D
30-040	Litchfield Comm Schs	*40-140	Oliver Twp S D 2
24-030	Littlefield Pub S D	23-080	Olivet Comm Schs
49-110	Mackinac Island Pub S D	71-050	Onaway Area Comm S D
16-070	Mackinaw City Pub Schs	51-060	Onekema Cons Sch
05-070	Mancelona Pub Sch	46-110	Onsted Comm Schs
81-080	Manchester Pub S D	*34-510	Orange Twp S D 1F
83-060	Manton Cons S D	*34-530	Orange Twp S D 5
23-065	Maple Valley S D	*34-600	Orleans Twp S D 9
14-050	Marcellus Comm Schs	*34-610	Orleans Twp S D 10
27-060	Marenisco S D	31-100	Osceola Twp S D
67-050	Marion Pub Sch	35-010	Oscoda Area Schs
*13-095	Mar-Lee Cons S D	19-120	Ovid Elsie Area Schs
76-140	Marlette Comm S D	32-090	Owendale Gagetown Area S D
*52-060	Marquette Twp S D	*34-040	Palo Comm S D
03-060	Martin Pub Schs	76-180	Peck Comm Sch
53-010	Mason County Central S D	24-040	Pellston Pub S D
53-020	Mason County Eastern S D	64-070	Pentwater Pub S D
58-090	Mason Cons S D	19-125	Pewamo Westphalia Comm S D
02-060	Mathias Twp Sch	17-090	Pickford Pub Schs
80-150	Mattawan Cons S D	47-080	Pinckney Comm Schs
79-090	Mayville Comm Schs	09-090	Pinconning Area Schs
57-030	McBain Rural Ag S D	67-055	Pine River Area Schs
74-120	Memphis Comm Schs	*62-080	Pineview S D
75-060	Mendon Comm S D	30-060	Pittsford Rural Ag Schs
56-050	Meridian Pub S D	32-120	Port Austin Pub Schs
73-230	Merrill Comm S D	32-130	Port Hope Comm Schs
83-070	Mesick Cons S D	*34-710	Portland Twp S D 5F
79-100	Millington Comm Schs	71-060	Posen Cons S D
68-010	Mio Au Sable S D	*52-100	Powell Twp S D
59-045	Montabella Comm S D	12-040	Quincy Comm S D
25-260	Montrose Twp Schs	21-060	Rapid River Pub Schs
*49-070	Moran Twp S D	61-210	Ravenna Pub Schs
46-100	Morenci Area Schs	30-070	Reading Comm Schs
54-040	Morley Stanwood Comm Schs	*32-140	Red Sch
78-060	Morrice Area Schs	67-060	Reed City Pub Schs
*75-300	Mottville Twp S D 3F	79-110	Reese Pub Schs
38-130	Napoleon S D	52-110	Republic Michigamme Schs
52-080	National Mine S D	11-033	River Valley S D
50-170	New Haven Comm Schs	*29-090	Riverdale Elem Sch
78-070	New Lothrop Area Pub S D	21-130	Rock Pub S D
62-070	Newaygo Pub S D	02-080	Rock River Twp Sch
30-050	North Adams Pub Schs	*34-750	Ronald Twp S D 8
44-090	North Branch Area Schs	*23-590	Roxand Twp S D 12
55-115	North Central Area Schs	17-110	Rudyard Twp Sch
22-045	North Dickinson County S D	46-130	Sand Creek Comm Schs
32-080	North Huron Schs	*52-130	Sands Twp S D
*34-480	North Plains Twp S D 1F	76-210	Sandusky Comm S D
45-040	Northport Pub S D	*76-710	Sanilac Twp S D 1
38-140	Northwest S D	34-120	Saranac Comm S D

COMMUNITY TYPE V (cont.)

03-080	Saugatuck Pub Schs	32-170	Ubly Comm Schs
39-160	Schoolcraft Comm Schs	13-135	Union City Comm S D
*34-800	Sebewa Twp S D 8	69-040	Vanderbilt Area Sch
*29-790	Seville Twp S D 4F	*32-650	Verona Twp S D 1F
64-080	Shelby Pub S D	*32-680	Verona Twp S D 5
37-060	Shepherd Pub S D	59-150	Vestaburg Comm Schs
*32-530	Sheridan Twp S D 4	30-080	Waldron Area Schs
*32-540	Sheridan Twp S D 5	64-090	Walkerville Rural Comm S D
*32-610	Sigel Twp S D 3	63-300	Waterford Twp S D
*32-620	Sigel Twp S D 4	27-080	Watersmeet Twp S D
*32-630	Sigel Twp S D 6	11-320	Watervliet S D
*40-020	South Boardman Area Sch	03-040	Wayland Union Schs
63-240	South Lyon Comm Schs	*64-095	Weare Crystal Comm S D
38-150	Springport Pub Sch	33-220	Webberville Pub Schs
73-240	St Charles Comm S D	*52-160	Wells Twp S D
*72-040	St Helen S D	65-045	West Branch Rose City Area Schs
*49-100	St Ignace Twp S D	70-070	West Ottawa Pub S D
06-050	Standish Sterling Comm S D	38-010	Western S D
*31-140	Stanton Twp S D	62-090	White Cloud Pub Schs
55-120	Stephenson Area Pub Schs	66-070	White Pine S D
33-200	Stockbridge Comm Schs	75-070	White Pigeon Comm S D
58-100	Summerfield S D	17-160	Whitefish Sch
*29-110	Sumner Elem Sch	58-110	Whiteford Ag S D
45-050	Suttons Bay Pub S D	81-140	Whitmore Lake Pub S D
13-130	Tekonsha Comm Sch	35-040	Whittemore Prescott Area S D
08-050	Thornapple Kellogg S D	16-100	Wolverine Comm S D
59-080	Tri-County Area Schs	74-130	Yale Pub S D

COUNTY CODE NUMBERS

01	Alcona	22	Dickinson	43	Lake	64	Oceana
02	Alger	23	Eaton	44	Lapeer	65	Ogemaw
03	Allegan	24	Emmet	45	Leelanau	66	Ontonagon
04	Alpena	25	Genesee	46	Lenawee	67	Osceola
05	Antrim	26	Gladwin	47	Livingston	68	Oscoda
06	Arenac	27	Gogebic	48	Luce	69	Otsego
07	Baraga	28	Grand Traverse	49	Mackinac	70	Ottawa
08	Barry	29	Gratiot	50	Macomb	71	Presque Isle
09	Bay	30	Hillsdale	51	Manistee	72	Roscommon
10	Benzie	31	Houghton	52	Marquette	73	Saginaw
11	Berrien	32	Huron	53	Mason	74	St. Clair
12	Branch	33	Ingham	54	Mecosta	75	St. Joseph
13	Calhoun	34	Ionia	55	Menominee	76	Sanilac
14	Cass	35	Iosco	56	Midland	77	Schoolcraft
15	Charlevoix	36	Iron	57	Missaukee	78	Shiawassee
16	Cheboygan	37	Isabella	58	Monroe	79	Tuscola
17	Chippewa	38	Jackson	59	Montcalm	80	Van Buren
18	Clare	39	Kalamazoo	60	Montmorency	81	Washtenaw
19	Clinton	40	Kalkaska	61	Muskegon	82	Wayne
20	Crawford	41	Kent	62	Newaygo	83	Wexford
21	Delta	42	Keweenaw	63	Oakland		

APPENDIX B

DEFINITIONS OF THE EDUCATIONAL ASSESSMENT MEASURES

For the reader's convenience, the twenty-five measures reported in the Michigan Educational Assessment Program are defined below. Those measures which are newly added since the 1969-70 assessment program are indicated by an asterisk (*).

I. SCHOOL RESOURCES

A. Human Resources

Seven human resource measures were included in the 1970-71 educational assessment program: (1) pupil-professional instructional staff ratio; (2) pupil-teacher ratio; (3) percent of teachers with five or more years experience; (4) average years teaching experience (1969-70); (5) percent of teachers with Masters degree; (6) percent of teachers earning \$11,000 or more; (7) average salary of teachers (1969-70). Each measure is described below.

1. Pupil-Professional Instructional Staff Ratio*

The information to compute this measure was taken from the "Fourth Friday Report". The total number of pupils was obtained by counting all pupils enrolled in grades one through twelve except special education pupils. Pupils who attended the school for a portion of the day and attended a nonpublic school for the remainder of the day, were included on a full time equivalency basis. For example, a pupil who attended the school for one-fourth of each day and attended a nonpublic school for the other three-fourths of each day was counted as 1/4 pupil. The total number of professional instructional staff was obtained by adding the number of elementary and secondary staff (expressed as full time equivalency) in the following

categories; principals, assistant principals, other administrators (excluding district-wide administrative staff), consultants and supervisors, classroom teachers, librarians, audio-visual staff, guidance personnel and school counselors, psychological staff, radio and television instructional staff, teachers of the homebound, and other instructional staff. In order to obtain the pupil-professional instructional staff ratio, the total number of pupils was divided by the total number of professional instructional staff.

2. Pupil-Teacher Ratio

The information to compute this measure was taken from the "Fourth Friday Report". The total number of pupils was obtained by counting all pupils enrolled in grades one through twelve except special education pupils. Pupils who attended the school for a portion of the day and attended a nonpublic school for the remainder of the day, were included on a full time equivalency basis. The total number of teachers was obtained by adding the number of elementary and secondary classroom teachers. Kindergarten teachers, special education teachers, and non-classroom teachers were not included in the total. In order to obtain the pupil-teacher ratio, the total number of pupils was divided by the total number of teachers.

3. Percent of Teachers with Five or More Years Experience*

The information to compute this measure was taken from the "Fourth Friday Report". It was obtained by dividing the number of classroom teachers (full-time and part-time) with five years or more teaching experience, by the total number of classroom teachers (full-time and part-time). The resultant value was multiplied by 100 to convert to a percent figure.

4. Average Years Teaching Experience (1969-70)

The information to compute this measure was taken from records provided by the local district and filed with the Michigan Department of Education. The information was based on the 1969-70 academic year. Excluded from the calculation of average years teaching experience were individuals who were employed to work exclusively in

the areas of administration, special education, adult education, guidance and counseling, and nursery work. All other professional personnel employed by the district were included in calculating average years of teaching experience. It was obtained by dividing the total years of teaching experience by the total number of teachers (full-time and part-time).

5. Percent of Teachers with Masters Degree

The information to compute this measure was taken from the "Fourth Friday Report". It was obtained by dividing the number of classroom teachers (full-time and part-time) who had completed all of the requirements for a Masters degree by the total number of classroom teachers (full-time and part-time). The resultant value was multiplied by 100 to convert to a percent figure.

6. Percent of Teachers Earning \$11,000 or More*

The information to compute this measure was taken from the "Fourth Friday Report". Teachers were considered to earn \$11,000 or more if their contractual salary for the academic year (excluding summer) was at least \$11,000. Supplementary money paid for responsibilities such as coaching was not included as part of the contractual salary. Part-time teachers were considered to earn at least \$11,000 if their full-time salary would equal at least \$11,000. This measure was obtained by dividing the number of classroom teachers (full-time and part-time) who earned at least \$11,000 by the total number of classroom teachers (full-time and part-time). The result was multiplied by 100 to convert to a percent figure.

7. Average Salary of Teachers (1969-70)

The information necessary to compute this measure was taken from records provided by the local districts and filed with the Michigan Department of Education. In order to compute the average salary of teachers, two values were necessary: (1) total salaries paid to teachers and (2) number of teachers. The value for total salaries paid to teachers was taken from financial information reported for the fiscal year which ended June 30, 1970. Included in the total were salaries paid to

elementary teachers and salaries paid to secondary teachers (full-time and part-time); salaries paid to special education teachers were not included. The number of teachers was based on information reported as of September 26, 1969 (the fourth Friday of the 1969-70 academic year). It is a count of elementary and secondary teachers employed as of that date.

The average salary paid to elementary and secondary teachers was computed by dividing the total salaries by the number of teachers. Since each of these two figures is taken from a different report prepared at a different time of the year, the resultant average salary must be considered as an estimate. It could be in error if the number of teaching positions actually paid for during the academic year differed from the number of teachers reported as of the fourth Friday after Labor Day.

B. School Financial Resources

Five school financial resources were included in the 1970-71 educational assessment program: (1) state equalized valuation per resident pupil; (2) local revenue per pupil; (3) state school aid per pupil; (4) K-12 instructional expense per pupil; and (5) total current operating expense per pupil. These measures are available at the district level only and are based on 1969-70 data. Each measure is described in detail below.

8. State Equalized Valuation per Resident Pupil (1969-70)

The information to compute this measure was taken from records filed with the Michigan Department of Education. The total state equalized valuation (SEV) is equal to approximately 50 percent of the fair cash value of the real and personal property in the district. It is calculated as of May 22, 1969 (the fourth Monday in May) and applied to the 1969-70 academic year. In order to obtain a per pupil value for SEV, the total SEV was divided by resident membership. Resident membership includes all pupils residing in the district who attended public school in

that district or in any other district; resident membership excludes pupils who attend school in the district but reside in another district, as well as excluding pupils who attend private or parochial schools.

9. Local Revenue per Pupil (1969-70)

The information to compute this measure was taken from records provided by the local districts and filed with the Michigan Department of Education. The financial information was reported for the fiscal year which ended June 30, 1970. The total value for local revenue included revenue from sources such as the following; property tax (the major source of local revenue), local government appropriations, tuition, transportation fees, revolving funds (i.e., revenue from food services, book stores, and student body activities) rent from school facilities, etc. Tuition from community college patrons was not included in the calculation. In order to obtain local revenue per pupil, total local revenue was divided by the total number of pupils enrolled in the district as of September 26, 1969 (the fourth Friday of the 1969-70 academic year).

10. State School Aid per Pupil (1969-70)

The information to compute this measure was taken from records provided by the local districts and filed with the Michigan Department of Education. The financial data were reported for the fiscal year which ended June 30, 1970. The value for total state school aid represented the direct appropriations from the state including appropriations for state school aid, driver education, underprivileged children, and other state grants. In order to compute the state school aid per pupil, the total state school aid was divided by the total number of pupils enrolled in the district as shown in the "Fourth Friday Report".

11. K-12 Instructional Expense per Pupil (1969-70)

The information to compute this measure was taken from records provided by the local districts and filed with the Michigan Department of Education. The financial information was reported for the fiscal year which ended June 30, 1970. The total

K-12 instructional expense included expenditures for salaries and supplies connected with elementary education, secondary education, special education, summer school, and adult education. Expenditures associated with community colleges were omitted from the calculation. In order to obtain a value for instructional expense per pupil, total K-12 instructional expense was divided by the total number of pupils enrolled in the district as shown in the "Fourth Friday Report".

12. Total Current Operating Expense per Pupil (1969-70)

The information to compute this measure was taken from records provided by the local districts and filed with the Michigan Department of Education. The financial information was reported for the fiscal year which ended June 30, 1970. The total current operating expense included expenses connected with administration, attendance, health services, pupil transportation, plant operation, plant maintenance, and fixed charges, in addition to instructional expenses (including elementary, secondary, special education, summer school, and adult education instructional expenses). Community college expenses were not included in the computation of total operating expense, the value for total current operating expense was divided by the total number of pupils enrolled in the district as shown in the "Fourth Friday Report".

II. STUDENT BACKGROUND

A. Student Racial-Ethnic Background*

(13) Percent of racial-ethnic minority students was computed for each school in the state. The information to compute this measure was taken from the "Fourth Friday Report". The total number of racial-ethnic minority students included all racial-ethnic minority students in the school except pre-kindergarten students. Kindergarten students, special education students and part-time students were all included in the total. Since the information was expressed in terms of a head count, part-time students were not counted differently from full-time students.

Students were classified as belonging to a racial-ethnic minority group if they were considered by the school to be of that group. The total number of students included all students except pre-kindergarten students. Again kindergarten students, special education students, and part-time students were included in the total. In order to calculate the percent of racial-ethnic minority students, the total number of racial-ethnic minority students was divided by the total number of students and the resultant figure was multiplied by 100.

B. Student Socioeconomic Background

(14) Students' estimate of socioeconomic status was computed for each school in the state. The assessment battery included twenty-five questions designed to indirectly assess group socioeconomic background. The questions concerned biographical information, educational attainment of parents, quality housing, family structure and stability, occupation, income, and possessions. For this measure, the questions asked of the fourth graders and the questions asked of the seventh graders were identical. It is important to note that the students anonymously responded to these questions; only the school name--not the student's name--was recorded on the answer sheet. Thus, it is impossible for anyone to ascertain the responses of a particular individual. Indeed, the purpose of the instrument is to arrive at a group measure not individual pupil measures.

III. SCHOOL/STUDENT PERFORMANCE

A. Performance on Attitude Measures

Three student attitude measures were included in the 1970-71 educational assessment battery. These were: (1) importance of school achievement; (2) self-perception; and (3) attitude toward school. For these three measures, students in the fourth and seventh grades received identical questions. As in the case of the student socioeconomic background measure, the purpose of the attitude instrument is

to arrive at a group measure not individual pupil measures. Each is discussed below.

15. Importance of School Achievement

The assessment battery included eight questions regarding the importance of school achievement. Here, too, it is important to note that the students anonymously responded to these questions; only the school name--not the student's name--was recorded on the answer sheet. Thus, again it is impossible for anyone to ascertain the response of a particular individual. A high score indicates that on the average pupils believe good school achievement is important.

16. Self-Perception

The assessment battery included seven questions designed to measure the student's self-perception. Again, the students responded anonymously. A high score indicates that on the average pupils believe themselves to be quite capable in school situations.

17. Attitude Toward School

The assessment battery included seven questions designed to measure the student's attitude toward school. Responses were anonymous. A high score indicates that on the average pupils have a positive attitude toward school.

B. Performance on Basic Skills Measures

Performance on the basic skills portion was determined by measuring the following: (1) vocabulary; (2) reading; (3) mechanics of written English; (4) mathematics; and (5) composite achievement. The number of items and time limits were increased for these tests in order to produce individually reliable measures. Additional technical information concerning these measures will be provided in a future educational assessment report.

18. Vocabulary

The vocabulary test contained 50 verbal analogy problems which were designed to measure students' knowledge of the meaning of words and the relationships

between words and concepts. The time allowed to work on this section was 20 minutes at both grades.

19. Reading

The reading test contained 50 questions which assessed paragraph comprehension, ability to understand words from the context in which they are encountered, and ability to identify the correct synonym for a word. Students at both grade levels were allowed 35 minutes to work on this section.

20. Mechanics of Written English

The mechanics of written English test consisted of four parts, each separately timed. In part A, spelling, students were to identify misspelled words. The fourth grade test presented 15 items to be completed in five minutes; the seventh grade test had 20 items and allowed six minutes. In part B, effectiveness of written expression, students were required to select the best way of expressing a thought. The test contained 14 items for each grade and nine minutes were allowed for its completion. In part C, written usage, students were to recognize grammatical errors. The fourth grade test contained 14 items and the seventh grade test contained 17 items; both tests to be completed in eight minutes. In part D, punctuation and capitalization, students were to recognize errors of punctuation and capitalization. The fourth grade test presented 12 items to be completed in eight minutes, and the seventh grade test presented 14 items to be completed in seven minutes.

21. Mathematics

The mathematics test involved mathematical reasoning and problem solving. In addition, problems in the seventh grade test involved algebraic and geometric concepts. Each grade had 30 minutes in which to answer 40 questions.

22. Basic Skills Composite Achievement

A composite achievement score was computed for each student. The composite score was obtained by averaging the individual's standard scores on reading, the

mechanics of written English, and the mathematics tests. The test scores were averaged in such a way that each score contributed equally to the average--despite the fact that the number of items was different on the three tests. IT SHOULD BE NOTED THAT THE VOCABULARY TEST SCORE WAS NOT INCLUDED IN THE CALCULATION OF THE COMPOSITE ACHIEVEMENT SCORE. The vocabulary score is believed to respond more slowly to the influence of schooling. Therefore, the vocabulary score was excluded to focus the composite achievement score upon those aspects of achievement that respond more readily to change.

C. Performance on Dropout Rate (1968-69)*

(23) School dropout rate was computed from information taken from records provided by the local districts and filed with the Michigan Department of Education. The measure was based on the local district's enrollment of students in grades 9-12 during the 1968-69 academic year. Included as dropouts were students who left school for any of the following reasons: married, sent to corrective institution, accepted employment, or dropped from attendance roll because absent 10-30 days. Not included as dropouts were students who left the district because they transferred to another district, were sent to institutions for defectives, or the student was sick or died. The dropout rate is calculated by dividing the number of dropouts by the sum of the number of students enrolled on the "fourth Friday" plus new students enrolled during the year. The resultant figure was multiplied by 100.

IV. SCHOOL AND DISTRICT SIZE

(24) Number of students in school was obtained by counting all pupils enrolled in grades one through twelve except special education pupils. Kindergarten pupils were not counted. Pupils who attended the school for a portion of the day and attended a nonpublic school for the remainder of the day, were included on a full time equivalency basis. For example, a pupil who attended a school for one-fourth

